

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION (37 CFR 1.63)			Attorney Docket Number	er 42P14512
			First Named Inventor	Goresh Balarmurugan
			COMPLETE IF KNOWN	
			Application Number	10/660,228
Declaration Submitted with initial		Declaration Submitted after initial	Filing Date	September 10, 2003
	OR	Filing (surcharge	Art Unit	
Filing		(37 CFR 1.16(e)) required)	Examinor Name	

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (If only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Adaptive Equalization using a	Conditional Update Sign-Sign Least l	Mean Square Algorithm .
	(Title of the Invention)	
the specification of which	·	
is attached hereto.		
OR		
	ilted States Application Number International Application Number	10/660,228
and was amended on		(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed Invention was ever known or used in the United States of America before my Invention thereof, or patented or described in any printed publication in any country before my Invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

p. 5

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, fisted below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filling date before that of the application on which priority is claimed.

Prior Foreign	n Application			Foreign Filling Date	PH	ority	Certified Copy
	aber(a)	Country	1	(MM/DD/YYYY)		laimed	Attached?
			-				Yes No
1	ľ				(]	☐Yes ☐No
Ĩ						ב כ	☐Yes ☐No
	- 1			1	ן כ	3	☐Yes ☐No
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nis document)	as my respect prosecute this ad herewith.	tive patent atto	meys a i to tran	pereto (which is inc and patent agents, sact all business i	with full n the U.	l power of .S. Patent	substitution and
LARILLING	th Z. Kalson akely, Sokoloff, T	aylor & Zafinan I	LP	<u></u>			
Address 124	400 Wilshire Boa	levard, 7th Floor					
City Los	s Angeles		State	California		Zip Code	90025
Country US	A	Te	lephone	(408) 720-8300		Fax	(408) 720-8383
made on inform with the knowle mprisonment,	nation and beli edge that wlift or both, under application or a	ef are belleved il false stateme · 18 U.S.C. 100 iny patent issue	to be to ents and 11 and to ed there	my own knowledgue; and further the like so made hat such willful falson.	at these are pun se state	statemen ishab le by ments ma	Is were made / fine or ry jeopardize the
	_E OR FIRST	INVENTOR:	∐ A pe	atition has been til	ed tor th	is unders	
IAME OF SOL							gned inventor
NAME OF SOL				Sanesh Balamurug	nn		
	P				an ame), and	Su∏ix [if a: 23 / ⊇	
full Name:	ature <u>B</u> . Urbana, Iltinois	Firet, Middle	[if any],	Sanesh Balamurug Family Name (or Swri Dat	an ame), and	23/2	سیا) 00 ل چ
full Name:	ature <u>B</u> . Urbana, Illinois	First, Middle USA City, State, Counti	[if any],	Sanesh Balamurug Family Name (or Swri Dat	ame), and	23/2	

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	• • • • • • • • • • • • • • • • • • • •	illy Name (or Surname), and	Stiller (A cus))
ventor's Sign	ature	Date	
Residence	Hillsboro, Oregon USA	Citizenship U	JSA
.001001100	(City, State, Country)		(Country)
lailing Addres			
dillig / toal or	Hillsboro, Oregon 97124 USA		
AME OF THI	RD INVENTOR: A petition has	been filed for this under	rsigned inventor
u¶ Name:		ames E. Jaussi	
	(First, Middle [if any], Fan	ntly Name (or Surname), and	
ventor's Sign	ature	Date	
esidence	Hillsboro, Oregon USA	Citizenship <u>T</u>	JSA
	(City, State, Country)		(Country)
failing Addres	ss 1469 NE Glen Ellen Drive		
	Hillsboro, Oregon 97124 USA		
AME OF FO	URTH INVENTOR: A petition has	been filed for this unde	rsigned Inventor
	_ ,		rsigned Inventor
	St	been filed for this under the R. Mooney	-
uli Name:	St. (First, Middle [if ony], For	ephen R. Mooney nily Name (or Surname), and	-
ull Name:	St (First, Middle [if ony], For nature	ephen R. Mooney nily Name (or Surname), and Date	Suffix [if any])
Full Name:	Ste (First, Middle [if any], For nature Beaverton, Oregon USA	ephen R. Mooney nily Name (or Surname), and	Suffix [g any]) JSA
Full Name: _ riveritor's Sign Residence	Studdle [if any], Fan (First, Middle [if any], Fan nature Beaverton, Oregon USA (City, State, Country)	ephen R. Mooney nily Name (or Surname), and Date	Suffix [if any])
ull Name:	Studdle [if any], Fan (First, Middle [if any], Fan nature Beaverton, Oregon USA (City , State, Country) SS 17265 NW Madras Court	ephen R. Mooney nily Name (or Surname), and Date	Suffix [g any]) JSA
ull Name: _ nventor's Sign	Studdle [if any], Fan (First, Middle [if any], Fan nature Beaverton, Oregon USA (City, State, Country)	ephen R. Mooney nily Name (or Surname), and Date	Suffix [g any]) JSA
Full Name:	Studdle [if any], Fan (First, Middle [if any], Fan nature Beaverton, Oregon USA (City , State, Country) SS 17265 NW Madras Court	ephen R. Mooney nily Name (or Surname), and Date	Suffix [g any]) JSA
full Name: nventor's Sign Residence failing Addres	Stuncture Beaverton, Oregon USA (City State, Country) 17265 NW Madras Court Beaverton, Oregon 97006 USA	ephen R. Mooney nily Name (or Surname), and Date	Suffix [if any]) JSA (Country,
full Name: nventor's Sign Residence failing Addres	Stature Beaverton, Oregon USA (City State, Country) 17265 NW Madras Court Beaverton, Oregon 97006 USA	ephen R. Mooney nily Name (or Surname), and Date Citizenship	Suffix [if any]) JSA (Country,
Full Name: nventor's Sign Residence //eiling Addres	Stature Beaverton, Oregon USA (City State, Country) SS 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has	ephen R. Mooney nily Name (or Surname), and Date Citizenship L been filed for this unde	Suffix [if any]) JSA (Country, rsigned inventor
Full Name: _ nventor's Sign Residence Mailing Addres NAME OF FIF	Stature Beaverton, Oregon USA (City State, Country) 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has (First, Middle [if any], Far	ephen R. Mooney nily Name (or Surname), and Date Citizenship L been filed for this unde	Suffix [if any]) JSA (Country, rsigned inventor
Full Name: _ nventor's Sign Residence Mailing Addres NAME OF FIF	Stature Beaverton, Oregon USA (City State, Country) SS 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has	ephen R. Mooney nily Name (or Surname), and Date Citizenship L been filed for this unde	Suffix [if any]) JSA (Country, rsigned inventor
Full Name: nventor's Sign Residence Meiling Addres NAME OF FIF	Studenture Beaverton, Oregon USA (City. State, Country) SS 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has (First, Middle [if any], Fan	ephen R. Mooney nily Name (or Surname), and Date Citizenship L been filed for this unde	Suffix [if any]) JSA (Country, rsigned inventor Suffix [if any])
ull Name: nventor's Sign tesidence failing Addres IAME OF FIF full Name:	Stature Beaverton, Oregon USA (City State, Country) 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has (First, Middle [if any], Far	ephen R. Mooney nily Name (or Surname), and Date Citizenship been filed for this under nily Name (or Surname), and	Suffix [if any]) JSA (Country, rsigned inventor
ventor's Sign esidence sailing Addres AME OF FIF uil Name: eventor's Sign	St. (First, Middle [if any], Far. Beaverton, Oregon USA (City State, Country) 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has (First, Middle [if any], Far. (City , State, Country)	ephen R. Mooney nily Name (or Surname), and Date Citizenship been filed for this under nily Name (or Surname), and	Suffix [if any]) JSA (Country, rsigned inventor Suffix [if any])
ull Name: nventor's Sign tesidence failing Addres IAME OF FIF uil Name:	Ste (First, Middle [if any], Farmature Beaverton, Oregon USA (City State, Country) SS 17265 NW Madras Court Beaverton, Oregon 97006 USA TH INVENTOR: A petition has (First, Middle [if any], Farmature (City , State, Country) SS	ephen R. Mooney nily Name (or Surname), and Date Citizenship been filed for this under nily Name (or Surname), and	Suffix [if any]) JSA (Country, rsigned inventor Suffix [if any])

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Rag. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Miml D. Dao, Reg. No. 45,628; Stephen M. De Kierk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 45,145; Tarek N. Fahrni, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adem Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jason R. Graff, Reg. No. 54,134; Jeffery Scott Helleson, Reg. No. 46,765; James A. Henry, Reg. No. 41,064; Willmore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,738; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan Carol Little-Washington, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Michael J. Maille, Reg. No. 38,591; Andre L. Marais, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonethan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Thinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 45,760; Joseph A. Pugh, Reg. No. 52,137; Jon C. Reall, Reg. No. 54,391; James H. Selter, Reg. No. 35,668; William W. Schaal, Reg. No. 39,018; James C. Scheller, Reg. No. 31,195; Kevin G. Shao, Reg. No. 45,095; Stanley W. Sokoloff, Reg. No. 25,128; Judith A. Szepesi, Reg. No. 39,393; Edwin H. Taylor, Reg. No. 25,129; Lisa Tom, Reg. No. 52,291; John F. Travis, Reg. No. 43,203; Kerry D. Tweet, Reg. No. 45,959; Mark C. Van Ness, Reg. No. 39,865; Thornas A. Van Zandt, Reg. No. 43,219; Mark R. Vatuone, Reg. No. 53,719; Lester J. Vincent, Reg. No. 31,460; John P. Ward, Reg. No. 40,218; Mark L. Watson, Reg. No. 46,322; Thomas C. Webster, Reg. No. 46,154; Chui-Kiu Teresa Wong, Reg. No. 48,042; and Norman Zafman, Reg. No. 26,250, my patent attorneys, and Chze Koon Chua, 53,831; Brent Vecchia, Reg. No. 48,011 and Lehua Wang, Reg. No. 48,023, my patent agents, with offices located at 12400 Wilshire Boulevard, 7th Floor, Los Angeles, California 90025, telephone (310) 207-9800; and James R. Thein, Reg. No. 31,710, my patent attorney. I also appoint Alan K. Aldous, Reg. No. 31,905; Rob D. Anderson, Reg. No. 33,826; Jay P. Beele, Reg. No. 50,901; Shireen I. Bacon, Reg. No. 40,494; R. Edward Brake, Reg. No. 37,784; Ben Burge, Reg. No. 42,372; Robert H. Chang, Reg. No. 48,765; George Chen, Reg. No. 50.807; Glen B. Choi, Reg. No. 43,546; Kenneth Cool, Reg. No. 40,570; Ted A. Crawford, Reg. No. 50,610; Robert A. Diehl, Reg. No. 40,992; Jeffrey S. Draeger, Reg. No. 41,000; Cyrrihia Thomas Fastz, Reg No. 39,973; Christopher Gagne, Reg. No. 36,142; Sharmini N. Green, Reg. No. 41,410; Robert Greenberg, Reg. No. 44,133; Bradley Greenwald, Reg. No. 34,341; Jeffrey B. Huter, Reg. No. 41,088; Seth Z. Kalson, Reg. No. 40,670; Peter Lam, Reg. No. 44,855; Issac Lin, Reg. No. 50,672; David C. Lundmark, Reg. No. 42,815; Anthony Martinez, Reg. No. 44,223; Larry Mennemeter, Reg. No. 51,003; Molly A. Mocall, Reg. No. 46,126; Paul Nagy, Reg. No. 37,898; Michael J. Neshelwat, Reg. No. 47,819; Dennis A. Nicholls, Reg. No. 42,036; Kathy J. Ortiz, Red. No. 54,351; Lanny Parker, Reg. No. 44,281; Michael D. Plimler, Reg. No. 43,004; Michael Prokech, Reg. No. 43,021; Kevin A. Reif, Reg. No. 36,381; Crystal D. Saylos, Reg. No. 44,318; Russell C. Scott, Reg. No. 43,103; Justin B. Scout, Reg. No. 54,431; Kennelh M. Seddon, Reg. No. 43,106; Mark Seeley, Reg. No. 32,299; Ami P. Shah, Reg. No. 42,143; David Simon, Reg. No. 32,758; Steven P. Skabrat, Reg. No. 36,279; Howard A. Skalst, Reg. No. 36,008; Paul E. Stelner, Reg. No. 41,326; Joni D. Stuman-Horn, Reg. No. 42,173; David Tran, Reg. No. 50,804; John F. Travis, Reg. No. 43,203; Robert G. Winide, Reg. No. 37,474; Sharon Wong, Reg. No. 37,760; Steven D. Yates, Reg. No. 42,242; Colvin E. Wells; Reg. No. 43,256; Michael Willerdson, Reg. No. 50,856 and Charles K. Young, Reg. No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, with full power of substitution and revocation, to prosecute this application and to fransact all business in the Patent and Trademark Office connected herewith.

2008

Title 37, Code of Federal Regulations, Section 1.56 Duty to Disclose Information Material to Patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of cander and good taith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information, which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability if all information known to be material to patentability of any claim issued in a patent was clied by the Office or submitted to the Office in the manner prescribed by \$§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office ancourages applicants to carefully examine:

- (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals essociated with the filling or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is meterial to patentability when it is not cumulative to information already of record or being made of record in the application, and
 - (1) It establishes, by itself or in combination with other information, a prime facile case of unpatentability of a claim; or ...
 - (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prime facte case of unpatentability is established when the information compols a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
 - (1) Each inventor named in the application;
 - (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or invantor may comply with this section by disclosing information to the attorney, agent, or inventor
- (e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paregraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.



DECLARATION AND POWER OF
ATTORNEY FOR PATENT APPLICATION
(37 CFR 1.63)

Declaration
Submitted
with initial
Filling

OR

Declaration
Submitted after Initial
Filing (surcharge
(37 CFR 1.16(e))
regulred)

Attorney Docket Number First Named Inventor		42P14512
		Ganesh Balamurugan
С	OM	PLETE IF KNOWN
Application Number	10	0/660,228
Filing Date Se		eptember 10, 2003
Art Unit		
Examiner Name		

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below, next to my name.

I believe I am the original and first inventor (if only one name listed below) or an original and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Adaptive Equalization using a Conditional Update Sign-Sign Least N	Mean Square Algorithm
(Title of the Invention)	
the specification of which	
is attached hereto.	
OR	
was filed on (if applicable): or	10/660,228
and was amended on	(if applicable)

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Prior Foreign Application Country Foreign Filling Date Charled Copy Attached? Attached?	Prior For	eign Application(s):						
	Prio	•	Countr	у				
						E]	Yes No
Inereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith. Direct all correspondence to:					·		ו כ	☐Yes ☐No
In hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith. Direct all correspondence to:			ļ				3	☐Yes ☐ No
I hereby appoint the persons listed on Appendix A hereto (which is incorporated by reference and a part of this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith. Direct all correspondence to:]							☐Yes ☐No
this document) as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith. Direct all correspondence to:]	☐Yes ☐No
Name Seth Z. Kalson Blakely, Sokoloff, Taylor & Zafman LLP Address 12400 Wilshire Boulevard, 7th Floor City Los Angeles State California Zip Code 90025 Country USA Telephone (408) 720-8300 Fax (408) 720-8383 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and bellef are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this undersigned inventor Full Name: Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence Utbana, Illinois USA Citizenship USA (City . State, Country) Mailing Address 1308 W. Main Street	this docu revocation Office co	ument) as my respector, to prosecute this onnected herewith.	ective patent atto s application and	orneys a d to tran	nd patent agent	ts, with full is in the U.	power of S. Patent	substitution and and Trademark
Blakely, Sokoloff, Taylor & Zafman LLP Address 12400 Wilshire Boulevard, 7th Floor City Los Angeles State California Zip Code 90025 Country USA Telephone (408) 720-8300 Fax (408) 720-8383 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and bellef are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this undersigned inventor [Full Name] Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence Urbana, Illinois USA Citizenship USA (Country) Mailing Address 1308 W. Main Street	Direct air	correspondence to:	Customer No	umber				
City Los Angeles State California Zip Code 90025 Country USA Telephone (408) 720-8300 Fax (408) 720-8383 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this undersigned inventor Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix (if any)) Inventor's Signature Date Residence Urbana, Illinois USA (City . State, Country) Mailing Address 1308 W. Main Street	Name	-	Taylor & Zafman l	LLP		. <u> </u>		
Country USA Telephone (408) 720-8300 Fax (408) 720-8383 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence Urbana, Illinois USA (City . State, Country) Mailing Address 1308 W. Main Street	Address	12400 Wilshire Be	oulevard, 7th Floor					
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this undersigned inventor Full Name: Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence Urbana, Illinois USA (City . State, Country) Mailing Address 1308 W. Main Street	City	Los Angeles	•	State	California		Zip Code	90025
made on information and bellef are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this undersigned inventor Full Name: Ganesh Balamurugan (First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence Urbana, Illinois USA Citizenship USA (City . State, Country) (Country) Mailing Address 1308 W. Main Street	Country	USA	Te	lephone	(408) 720-8300		Fax	(408) 720-8383
(First, Middle [if any]. Family Name (or Surname), and Suffix [if any]) Inventor's Signature Date Residence	made on information and bellef are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.							
Residence Urbana, Illinois USA Citizenship USA (City . State, Country) (Country) Mailing Address 1308 W. Main Street	Full Nam	ie:	First Middle				Suffix (if a)	nv1)
(City . State, Country) (Country) Mailing Address 1308 W. Main Street	Inventor's	s Signature	(1 4/34, 1/11/4/4)	. [9 4).				
(City , State, Country) (Country) Mailing Address 1308 W. Main Street	Residen	ce Urbana, Illinois	s USA		Citi	izenship i	USA	
	55,451			(עדי	-			(Country)
Urbana, Illinois 61801 USA	Mailing A	Address 1308 W.	Main Street					
		Urbana,	Illinois 61801 USA					

NAME OF SECOND INVENTOR:	A petition has been fi	led for this undersi	gned inventor
Full Name:	Bryan K	. Casper	
A (Fi	rst, Middle [if any], Family Nam		ffix [if any])
Inventor's Signature Dom	hlon	Date	-/10/03
Residence Hillsboro, Oregon USA	tate, Country)	Citizenship US.	(Country)
Mailing Address 3215 NE 11th Wa			
Hillsboro, Oregon	97124 USA		
NAME OF THIRD INVENTOR:	A petition has been f	iled for this unders	gned inventor
Full Name:		. Jaussi	
(Fi	rst, Middle [if any], Family Nam		ffix (if any))
Inventor's Signature Affair	Effusi	Date/	2-10-03
1		0111	A
Residence Hillsboro, Oregon USA	tate, Country)	Citizenship US	(Country)
			(444)
Mailing Address 1469 NE Glen Ell Hillsboro, Oregon			
NAME OF FOURTH INVENTOR:	A petition has been f	filed for this unders	Igned inventor
Full Name:		R. Mooney	
Inventor's Signature	rst, Middle [if apy], Family Nan		- 10 - 0 3
Residence Beaverton, Oregon US		Citizenship US	
	tate, Country)		(Country)
Mailing Address 17265 NW Madr			
Beaverton, Orego	n 97006 USA		
NAME OF FIFTH INVENTOR:	A petition has been	filed for this unders	igned inventor
Full Name:	irst, Middle [if any], Family Nan	ne (or Surname), and S	uffix [if any])
Inventor's Signature		Date	
Residence		Citizenship	
(City, S	State, Country)		(Country)
Mailing Address		·	
Docket No. 42P14512	-3-		

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,296; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahml, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jason R. Graff, Reg. No. 54,134; Jeffery Scott Heileson, Reg. No. 46,765; James A. Henry, Reg. No. 41,064; Willimore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,736; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan Carol Little-Washington, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Michael J. Mallie, Reg. No. 36,591; Andre L. Marals, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonathan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Thinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 45,750; Joseph A. Pugh, Reg. No. 52,137; Jon C. Reali, Reg. No. 54,391; James H. Salter, Reg. No. 35,668; William W. Schaal, Reg. No. 39,018; James C. Scheller, Reg. No. 31,195; Kevin G. Shao, Reg. No. 45,095; Stanley W. Sokoloff, Reg. No. 25,128; Judith A. Szepesi, Reg. No. 39,393; Edwin H. Taylor, Reg. No. 25,129; Lisa Tom. Reg. No. 52,291; John F. Travis, Reg. No. 43,203; Kerry D. Tweet, Reg. No. 45,959; Mark C. Van Ness, Reg. No. 39,865; Thomas A. Van Zandt, Reg. No. 43,219; Mark R. Vatuone, Reg. No. 53,719; Lester J. Vincent, Reg. No. 31,460; John P. Ward, Reg. No. 40,216; Mark L. Watson, Reg. No. 46,322; Thomas C. Webster, Reg. No. 46,154; Chui-Kiu Teresa Wong, Reg. No. 48,042; and Norman Zafman, Reg. No. 26,250, my patent attorneys, and Chze Koon Chua, 53,831; Brent Vecchia, Reg. No. 48,011 and Lehua Wang, Reg. No. 48,023, my patent agents, with offices located at 12400 Wilshire Boulevard, 7th Floor, Los Angeles, California 90025, telephone (310) 207-3800; and James R. Thein, Reg. No. 31,710, my patent attorney. I also appoint Alan K. Aldous, Reg. No. 31,905; Rob D. Anderson, Reg. No. 33,826; Jay P. Beale, Reg. No. 50,901; Shireen I. Bacon, Reg. No. 40,494: R. Edward Brake, Reg. No. 37,784; Ben Burge, Reg. No. 42,372; Robert H. Chang, Reg. No. 48,765; George Chen, Reg. No. 50,807; Glen B. Chol, Reg. No. 43,546; Kenneth Cool, Reg. No. 40,570; Ted A. Crawford, Reg. No. 50,610; Robert A. Diehl, Reg. No. 40,992; Jeffrey S. Draeger, Reg. No. 41,000; Cynthia Thomas Faatz, Reg No. 39,973; Christopher Gagne, Reg. No. 36,142; Sharmini N. Green, Reg. No. 41,410; Robert Greenberg, Reg. No. 44,133; Bradley Greenwald, Reg. No. 34,341; Jeffrey B. Huter, Reg. No. 41,086; Seth Z. Kalson, Reg. No. 40,670; Peter Lam, Reg. No. 44,855; Issac Lin, Reg. No. 50,672; David C. Lundmark, Reg. No. 42,815; Anthony Martinez, Reg. No. 44,223; Larry Mennemeier, Reg. No. 51,003; Molly A. Mocall, Reg. No. 46,126; Paul Nagy, Reg. No. 37,896; Michael J. Nesheiwat, Reg. No. 47,819; Dennis A. Nicholis, Reg. No. 42,036; Kathy J. Ortiz, Reg. No. 54,351; Lanny Parker, Reg. No. 44,281; Michael D. Plimier, Reg. No. 43,004; Michael Proksch, Reg. No. 43,021; Kevin A. Reif, Reg. No. 36,381; Crystal D. Sayles, Reg. No. 44,318; Russell C. Scott, Reg. No. 43,103; Justin B. Scout, Reg. No. 54,431; Kenneth M. Seddon, Reg. No. 43,105; Mark Seeley, Reg. No. 32,299; Ami P. Shah, Reg. No. 42,143; David Simon, Reg. No. 32,756; Steven P. Skabrat, Reg. No. 36,279; Howard A. Skalst, Reg. No. 36,008; Paul E. Steiner, Reg. No. 41,326; Joni D. Stutman-Horn, Reg. No. 42,173; David Tran, Reg. No. 50,804; John F. Travls, Reg. No. 43,203; Robert G. Winkle, Reg. No. 37,474; Sharon Wong, Reg. No. 37,760; Steven D. Yates, Reg. No. 42,242; Calvin E. Wells; Reg. No. 43,256; Michael Willardson, Reg. No. 50,856 and Charles K. Young, Reg. No. 39,435; my patent attorneys and my patent agents, of INTEL CORPORATION; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Title 37, Code of Federal Regulations, Section 1.56 Duty to Disclose Information Material to Patentability.

- (a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information, which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability of any claim issued in a patent was clied by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:
 - (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filling or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application; and
 - (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
 - (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (I) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
 - (1) Each inventor named in the application;
 - (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.
- (e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all Information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filling date of the prior application and the national or PCT International filling date of the continuation-in-part application.